

# Reliable®

## Model G VELO PEND Specific Application NFPA 231C .6 Density/2,000 Sq. Ft.

**Lower Pressures for  
High Hazard Protection**  
.70 Orifice, 14.5 K Factor,  
7psi Minimum End Head Pressure,  
UL and cUL Listed, FM Approved,  
NYC MEA 258-93-E

### Features

The Reliable Model G VELO sprinkler offers the opportunity for:

1. Pipe size reduction
2. Fewer sprinklers
3. Elimination of booster pumps
4. Design area reduced to 2,000 sq. ft.
5. Storage within 18" of the deflector (UL and cUL applications only)
6. Simplifies future ESFR conversions

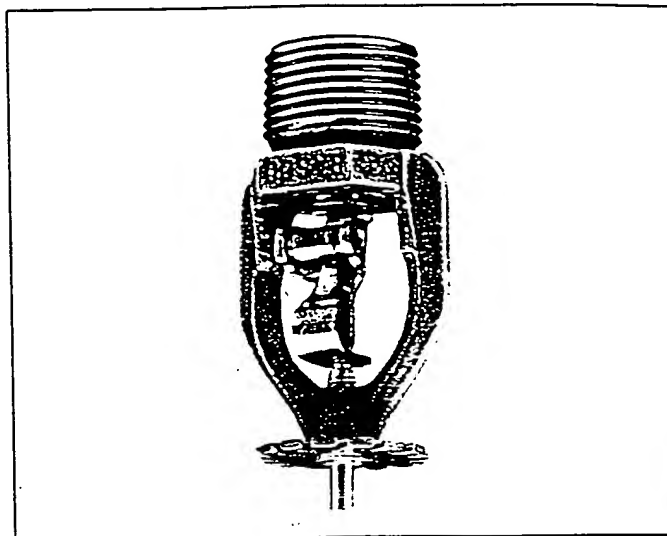
### Product Description

The Reliable Model G VELO sprinkler is a very extra large orifice pendent sprinkler that has been designed to control high challenge fires in both palletized and rack storage occupancies utilizing lower water pressures. The Model G VELO pendent utilizes a center strut solder in compression fusible element.

It has been proven in UL and FM full-scale fire testing, complies with all applicable mechanical and hydraulic requirements of the latest sprinkler standards and is listed by Underwriters Laboratories, certified for Canada by Underwriters Laboratories, and approved by Factory Mutual Research Corporation.

The sprinkler carries a "Specific Application"™ sprinkler listing from Underwriters Laboratories, Inc. which allows its use in single, double or multiple row racks without in rack protection up to 20ft. high in 25ft. buildings storing cartoned Class IV commodities containing Group A or B plastics with an overhead density of .6 gpm/sq. ft. and a remote design area of 2,000 sq. ft. This compares to the NFPA 231C requirement for 1/2" and 1/32" orifice sprinklers of .6 gpm/sq. ft. and a remote design area of 4,000 sq. ft.

Factory Mutual standards also allow the same 2000 sq.ft. remote design area when VELO sprinklers are used in this situation.



### Installation

Reliable's Model G VELO Pendent sprinkler must be installed according to the NFPA Standards shown below or the appropriate Factory Mutual Data Sheet as well as the authority having jurisdiction.

NFPA Standard	Underwriters Laboratories	Certified for Canada By Underwriters Laboratories	Factory + Mutual
13	Yes	Yes	Yes
231C*	Yes	Yes	Yes

\*TIA 95-1 (NFPA 231C) has been approved for acceptance into NFPA 231C. As this standard is revised the VELO will be included. The VELO is included in NFPA 13.

+The Model G VELO is approved by Factory Mutual for all area/density methods of design, as referenced by FM Loss Prevention Data Sheets.

™Refer to Page 2 for the complete "Specific Application" Listing.

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## Installation Data

Sprinkler Type	"K" Factor		Sprinkler Height	Approvals
	US	Metric		
Pendent 1/2" orifice with 3/4" NPT	14.5	209.0	3.10"	1,2,3,4

## Temperature Ratings

Classification	Sprinkler Rating		Maximum Ceiling Temperature		Frame Color
	°F	°C	°F	°C	
Ordinary	165	74	100	38	Uncolored
Intermediate	212	100	150	66	White
High	286	141	225	107	Blue

## Finishes

Approvals	
Natural Bronze	-All Temperature Ratings
Bright Chrome Plated	-All Temperature Ratings
Lead Plated	-165°F, 212°F, & 286°F Temp Ratings
Corroproofed	-165°F Clear Wax, 212°F Brown Wax
Corroproofed Over Lead Plated	-165°F Clear Wax, 212°F Brown Wax

## Design Criteria

The following criteria apply when designing an automatic sprinkler system utilizing the Model G VELO sprinkler for this application.

- The same design criteria that are applied to 1/2" and 3/4" orifice sprinklers.
- Sprinkler spacing shall be a minimum of 6 ft.
- Minimum design pressure 7 psi.
- Factory Mutual approval for Model G VELO sprinkler requires sprinkler installation directly into a branch line sprinkler fitting. The use of drops or arm overs is not permitted.
- Factory Mutual Loss Prevention Data Sheets contain requirements which differ from NFPA.

The Model G VELO sprinkler is not a "Large Drop" or "ESFR" sprinkler.

## Maintenance

The Model G VELO Sprinkler should be inspected quarterly and the sprinkler system maintained in accordance with NFPA 25. Do not clean sprinklers with soap and water, ammonia or any other cleaning fluids. Remove dust by using a soft brush or gentle vacuuming. Remove any sprinkler which has been painted (other than factory applied) or damaged in any way. A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers.

## Patents

Patents are pending.

## Approvals

1. Underwriters Laboratories, Inc.
2. Underwriters Laboratories Certification for Canada
3. Factory Mutual Research Corp.
4. NYC MEA 258-93-E

## ULI Listing Category

### Specific Application Sprinkler

The UL Specific Application Listing is:

The Model G VELO pendent sprinkler is intended for use in accordance with NFPA 13, 231, 231C, 231D and 231F Standards when installed in accordance with the standard sprinkler positioning and area/density flow calculation requirements as specified in each respective standard. When acceptable to the authority having jurisdiction, the Model G VELO Pendent sprinkler may be installed to protect single, double and multiple row and portable rack storage of Class I-IV group A and B plastics, cartoned, expanded or unexpanded, as well as exposed unexpanded with a maximum storage height of 20 ft., maximum ceiling height of 25 ft., 18" minimum deflector to top of storage clearance, design density of 0.60 gpm/sq. ft. and a design area of 2000 sq. ft. for wet systems and 2600 sq. ft. for dry systems.

## Ordering Information

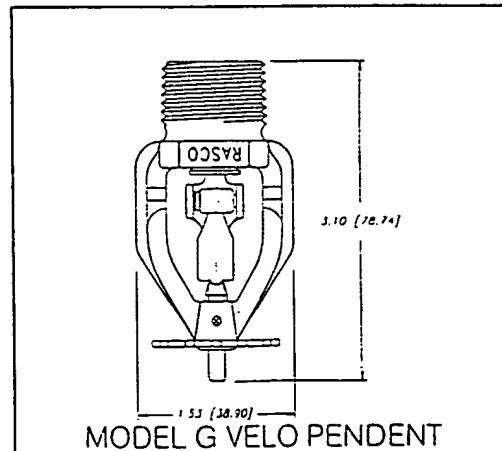
Specify:

1. Sprinkler Model
2. Temperature Rating
3. Finishes

## Model H Sprinkler Wrench



Use only the Model H sprinkler wrench for sprinkler removal and installation. Any other type of wrench may damage the sprinkler.



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The equipment presented in this bulletin is to be installed in accordance with the latest published standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable.

Products manufactured and distributed by Reliable have been protecting life and property for over 70 years, and are installed and serviced by the most highly qualified and reputable sprinkler contractors located throughout the United States, Canada and foreign countries.

Manufactured by

# Reliable®

The Reliable Automatic Sprinkler Co., Inc.

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